

#2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Edward W. Kohler, Jr., et al.      Art Unit : Unknown  
 Serial No. :    Examiner : Unknown  
 Filed :  
 Title : Thwarting Source Address Spoofing-Based Denial of Service Attacks



Commissioner for Patents  
 Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449, copies of which are enclosed.

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 8/16/2001

[Signature]  
 Denis G. Maloney  
 Reg. No. 29,670

Fish & Richardson P.C.  
 225 Franklin Street  
 Boston, MA 02110-2804  
 Telephone: (617) 542-5070  
 Facsimile: (617) 542-8906

20284862.doc

CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EL485675792US

I hereby certify under 37 CFR §1.10 that this correspondence is being deposited with the United States Postal Service as Express Mail Post Office to Addressee with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit August 16, 2001

[Signature]  
 Signature

Samantha Bell  
 Typed or Printed Name of Person Signing Certificate

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12221-006001	Application No.
	Applicant Edward H. Kohler, Jr., et al.		
	Filing Date Herewith	Group Art Unit	

 11040 U.S. PTO  
09/931487


U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AJ							
	AK							
	AL							
	AM							
	AN							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AO	Steve Bellovin. DDoS Attacks and Pushback. NANOG21, Feb 18, 2001 <a href="http://www.aciri.org/pushback">http://www.aciri.org/pushback</a>
	AP	Ratul Manajan, Steven M. Bellovin, Sally Floyd, Vern Paxson, Scott Shenker, and John Ioannidis. Controlling High Bandwidth Aggregates in the Network. draft paper, Feb 2001. <a href="http://www.aciri.org/pushback">http://www.aciri.org/pushback</a>
	AQ	Stefan Savage, David Wetherall, Anna Karlin and Tom Anderson. Practical Network Support for IP Traceback. Proceedings of 2000 ACM SIGCOMM, Stockholm, Sweden, August 2000. <a href="http://www.cs.washington.edu/homes/savage/traceback.html">http://www.cs.washington.edu/homes/savage/traceback.html</a>
	AR	Steve Bellovin. ICMP Traceback Messages. AT&T Labs Research, Mar 2000. <a href="http://www.research.att.com/~smb/papers/draft-bellovin-itrace-00.txt">http://www.research.att.com/~smb/papers/draft-bellovin-itrace-00.txt</a>

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12221-006001	Application No.
	Applicant Edward H. Kohler, Jr., et al.		
	Filing Date Herewith	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AS						
	AT						
	AU						
	AV						
	AW						
	AX						
	AY						
	AZ						
	AAA						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	ABB							
	ACC							
	ADD							
	AEE							
	AFF							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AGG	Cisco. Characterizing and Tracing Packet Floods Using Cisco Routers. <a href="http://www.cisco.com/warp/public/707/22.html">http://www.cisco.com/warp/public/707/22.html</a>
	AHH	D. Senie. RFC2644 (BCP34), Changing the Default for Directed Broadcasts in Routers. IETF, August 1999. <a href="http://www.ietf.org/rfc/rfc2644.txt">http://www.ietf.org/rfc/rfc2644.txt</a>
	AII	P. Ferguson, D. Senie. RFC2827 (BCP38): Network Ingress Filtering: Defeating Denial of Service Attacks which employ IP Source Address Spoofing. IETF, May 2000. <a href="http://www.ietf.org/rfc/rfc2827.txt">http://www.ietf.org/rfc/rfc2827.txt</a>
	AJJ	David G. Andersen, Hari Balakrishnan, and M. Frans Kaashoek, Robert Morris. The Case for Resilient Overlay Networks. Proc. of HotOS-VIII, Schloss Elmau, Germany, May 2001. <a href="http://nms.lcs.mit.edu/papers/ron-hotos2001.pdf">http://nms.lcs.mit.edu/papers/ron-hotos2001.pdf</a>

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12221-006001	Application No.
	Applicant Edward H. Kohler, Jr., et al.		
	Filing Date Herewith	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AKK						
	ALL						
	AMM						
	ANN						
	AOO						
	APP						
	AQQ						
	ARR						
	ASS						
	ATT						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AUU							
	AVV							
	AWW							
	AXX							
	AYY							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AZZ	Cisco. Web-Site Security and Denial-of-Service Protection. <a href="http://www.cisco.com/warp/public/cc/pd/si/11000/prodlit/cswsc_wi.htm">http://www.cisco.com/warp/public/cc/pd/si/11000/prodlit/cswsc_wi.htm</a>
	AAAA	Analysis of a Denial of Service Attack on TCP" by Schuba et al Proceedings of the 1997 IEEE Symposium on Security and Privacy (IEEE Computer Society Press, May 1997
	ABBB	Stefan Savage, David Wetherall, Anna Karlin and Tom Anderson. Practical Network Support for IP Traceback. Work in progress Technical Report UW-CSE-00-02-01. Date unknown. <a href="http://www.cs.washington.edu/homes/savage/traceback.html">http://www.cs.washington.edu/homes/savage/traceback.html</a>
	ACCC	Web page entitled "Aggregate Based Congestion Control and Pushback" last modified April 2001 Found at <a href="http://www.aciri.org/pushback">http://www.aciri.org/pushback</a>

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12221-006001	Application No.
	Applicant Edward H. Kohler, Jr., et al.		
	Filing Date Herewith	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ADDD						
	AEEE						
	AFFF						
	AGGG						
	AHHH						
	AIII						
	AJJJ						
	AKKK						
	ALLL						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AMMM							
	ANNN							
	AOOO							
	APPP							
	AQQQ							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	ARRR	D. Song et al., "Advanced and Authenticated Marking Schemes for IP Traceback", Proc. IEEE INFOCOM, April 2001, pp. 878-886.
	ASSS	R. Stone, "CenterTrack: An IP Overlay Network for Tracking DoS Floods", Proceedings of 9 <sup>th</sup> USENIX Security Symposium, Denver, CO, August 2000, pp. 199-212.
	ATTT	H. Burch et al., "Tracing Anonymous Packets to Their Approximate Source", Proc. USENIX LISA 00, December 2000, pp. 319-327.
	AUUU	

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	